Journal of the Society of Arts.

FRIDAY, JANUARY 4, 1867.

Announcements by the Council.

ORDINARY MEETINGS.

Wednesday Evenings at Eight o'clock :—

JANUARY 16.—"On Mercantile Marine Legislation, as affecting the Number and Efficiency of British Seamen." By Captain TOYNBEE, F.R.A.S.

JANUARY 23.—"On the Iron Permanent Way used on German Railways." By T. A. ROCHUSSEN, Esq.

JANUARY 30.—"On Artificial Illumination." By D. N. DEFRIES, Esq.

CANTOR LECTURES.

The following is the syllabus of the course of Six Lectures "On Pottery and Porcelain," illustrated by specimens of various manufactures, and by photographs and diagrams, to be delivered by William Chaffers, Esq. :—

LECTURE I.—MONDAY, JANUARY 21, 1867.

ANCIENT POTTERY.—Introduction. Assyria and Chaldea, Egypt, Greece, Etruria, Rome, &c.

LECTURE II.—MONDAY, JANUARY 28.

MAIOLICA.—Italy, Spain, Persia, &c.

LECTURE III.—MONDAY, FEBRUARY 4.

FAYENCE.—France, Spain, Portugal, Russia, Sweden, Denmark, &c.

GRÈS OR STONE WARE of Germany and Flanders.

DELFT WARE, &c.

LECTURE IV.—MONDAY, FEBRUARY 11.

ORIENTAL PORCELAIN.—China, Japan.

LECTURE V.—MONDAY, FEBRUARY 18.

EUROPEAN PORCELAIN. — Italy, Germany, France, Holland, Belgium, Russia, Poland, &c.

LECTURE VI.—MONDAY, FEBRUARY 25.

ENGLISH POTTERY AND PORCELAIN.—Early History, continued to the beginning of the 19th century.

The lectures will commence each evening at eight o'clock, and are open to members, each of whom has the privilege of introducing one friend to each lecture.

A new list of members of the Society has been printed, and any member can have a copy sent to him on application to the Secretary.

SUBSCRIPTIONS.

The Christmas subscriptions are due, and should be forwarded by cheque or Post-office order, crossed "Coutts and Co.," and made payable to Mr. Samuel Thomas Davenport, Financial Officer.

PRIZES TO ART WORKMEN.

The works sent in competition for the Prizes offered this Session will be placed in the Great Room, for the inspection of Members and their friends, on and after Wednesday next.

The following is a catalogue of the works received :—

FIRST DIVISION.

WORKS TO BE EXECUTED FROM PRESCRIBED DESIGNS.*

1. CARVING IN STONE.—Panel, after chimney piece by *Donatello*, by J. Daymond, Jun., 4, Edward-street, Vauxhall-bridge-road, S. Price £8.
2. Ditto, Gothic bracket, by E. J. Price £5.
3. Ditto, by John Edward Daly, 33, Medway-street, Westminster, S.W. Price £15.
4. Ditto, by John Barker, 4, John-street, Marlborough-road, Chelsea, S.W. Price £12.

*5. Flowers carved in Caen stone, by W. H. Holmes, 101, Dean-street, Soho, W.

*6. Head, in marble, "Ecce Homo," by J. P. F. Jones, 4, Surrey-villas, Nunhead-green, Peckham Rye, S.E. Copies made for £5.

*7. Basso relievo, in marble, representing the Arts and Sciences, by the above. Price when finished £20.

*8. Ditto, in marble, by the above.

*9. CARVING IN STONE.—"Christ blessing little Children," by H. Francis, Reigate-heath, Surrey.

*10. Ditto, "First Steps in Life," by the above.

*11. Ditto, specimens of letter-cutting in stone, by the above.

*12. MODELLING IN PLASTER.—National emblems, arranged by J. Daymond, Jun., 4, Edward-street, Vauxhall-bridge-road, S. Price £8.

*13. HEAD IN CAEN STONE.—"Winter," by T. Herne, 22, Werrington-street, Oakley-square, N.W.

14. CARVING IN WOOD, after design by *Holbein*, by T. E. Mayle, 33, James-street, Stockwell, S.

*14*a*. CARVING AND GILDING.—A Glass Frame, designed and carved by W. M. Holmes, principal part of the Flowers by Mouatt (deceased), gilt in double mat and burnished by Messrs. Buchholtz, Venning, Chowne, sen., Ettershank, Connor, and Allen; exhibited by J. H. Wyatt, 101, Dean-street, W.

15. REPOUSSÉ WORK IN METAL.—Executed in iron, after the Martelli bronze mirror case at South Kensington, by G. Page, 39, Duglas-street, Northampton-road, Clerkenwell, E.C. Price £20.
16. Ditto, by J. S. Nicholls, 4, Everilda street, Hemingford-road, Islington, N. Price £5.
16*a*. Ditto, on silver cup, by X. Y. Z. Price £30.
17. Ditto, on silver, by V. U. (Unfinished.)
18. Ditto, "Raphael's Three Graces," in silver, by Joseph Hakowski, 59, Frith-street, Soho-square, W. Price £20. Copies at £15.
18*a*. Ditto, "Three Graces," in silver, by X. Y. Z. Price £12.
19. Ditto, "Three Graces," in copper, silvered, by Charles Yerman, 14, Gerrard-street, Islington, N.
20. Ditto, "Three Graces," in copper, by Alexander Dufour, 36, Cleveland-street, Fitzroy-square, W.
21. Ditto, "Three Graces," in copper, by W. Holliday, 14, Nailour-street, Islington, N. Price £15.

*22. Ditto, Portrait of the late Viscount Palmerston, by the above. (Sold.)

*23. Ditto, Group, in copper, "Abundance," after *J. Van Eycken*, by Thomas James Bowman, 3, Rheidol-terrace, St. Peter's, Islington, N. Price £7 10s.

*23*a*. Ditto, "Raffle-leafage." Price £5.

* Those marked with an asterisk (*) are not after the prescribed designs.

24. HAMMERED WORK IN BRASS.—Adapted for use as a bracket, by W. Mansfield, 72, Bishop's-road, Camberwell New-road, S.
25. Ditto, by E. Millward, 35, Little Clarendon-street, Somers-town, N.W.
26. Ditto, by Albert Edward Millward, 13, New Compton-street, Soho, W.

27. HAMMERED WORK IN IRON.—Ditto, by Alfred Millward, 35, Little Clarendon-street, Somer's-town, N.W.
28. Ditto, by G. H. Price £5 10s.
29. Ditto, by James Gwillim, 19, Sidney-square, Mile-end, E. Price £15.
*30. Ditto, by the above. Price £20.
30*a*. Panel for a screen, by W. Letheren, Lansdown Iron Works, Cheltenham.
*31. Ditto, by William Cunliffe, St. Peter's-street, Burnley. Price £5 5s.
*32. Ditto, Bread-basket, designed by A. W. Blcomfield, Esq., architect, for East Sheen Church; executed by T. Winstanley, 7, Stanhope-street, Clare-market, W.C. Price £12.

33. CARVING IN IVORY.—Medallion portrait of Flaxman, by J. W. Bentley, 22, Sherwood-street, Golden-square, W. Price £10.

34. CHASING IN BRONZE.—Bust of "Clytie," by Frederick Beech, 52, Great Colmore-street, Birmingham. Price £16 16s.
35. Ditto, by H. R. Batchelor, Jun., 149, St. John-street-road, E.C. Price £14.
36. Ditto, by T. Nichols, 4, Everilda-street, Hemingford-road, Islington, N. Price £15.
37. Ditto, Ornament, after *Goutier*, by R. Reynolds, 15, Oak-village, Kentish-town, N.W. Price £15.
38. Ditto, Ornament, after *Goutier*, by G.
39. Ditto, Ornament, after *Goutier*, by H. J. Hatfield, 16, Alfred-street, Tottenham-court-road, W.C. Price £15.
*40. Ditto, Statuette of "Caractacus," by the above.
*41. Ditto, Group, "Jacob Wrestling with the Angel," by the above.
*42. Two miniature frames, raised and chased by the above.
43. Engraving on metal, after arabesques, by G. S. B. Price £3 10s.
44. Ditto, by G. Berry, 31, Brewer-street, Golden-square, W. Price £4 4s.
45. Ditto, by William Rowe, 4, Larkhall-lane, Clapham, S. Price £3.
*46. Ditto, by Gilles McKenzie, Tudor-street, Sheffield.
*47. Ditto, by the above.
*48. Ditto, by the above.
*49. Ditto, on silver cup, by the above.

*50. ENAMEL PAINTING ON COPPER.—"Madonna and Fish," after *Raphael*, by Frederick Lowe, 13, Wilderness-row, E.C.
*51. Ditto, "Boy and Doves," after *Raphael*, by Walter J. W. Nunn, 10, Gardour-street, Brome-head-street, Commercial-road, E. Price £5.

52. PAINTING ON PORCELAIN.—"Two Children," in *Raphael's* cartoon of "Lystra," painted on a vase, by Edwin Saunders, Messrs. Battam and Son, Gough-square, E.C.
53. Ditto, "Two Children," painted on a vase, by W. J. W. Nunn, Messrs. Battam and Son, Gough-square, E.C.
54. Ditto, "Two Children," by F. D. Bradley, West-parade, Mount-pleasant, Stoke-upon-Trent. Price £4 4s.
55. Ditto, "Two Children," by John Slater, Field-place, Stoke-upon-Trent. Price £3 3s.
56. Ditto, "Two Children," by William Slater, Field-place, Stoke-upon-Trent. Price £3 10s.
57. Ditto, "Two Children," by William H. Slater, Oakhill-cottages, Stoke-upon-Trent. £5 10s.
58. Ditto, ornament, by F. D. Bradley, West-parade, Mount-pleasant, Stoke-upon-Trent. £5 5s.
59. Ditto, Ornament, by Alexander Fisher, 5, Clyde-street, Stoke-upon-Trent.
*60. Ditto, Ornament, plateau in blue, after design by *Maestro Ludovico*, by the above.
*61. Ditto, Pair of door finger-plates, majolica style, by Miss L. Leila Hawkins. Price £5 5s.
*62 & 63. Ditto, Circular-plates, subjects from the "Signatura" ceiling, by W. P. Rhodes, School of Arts, Stoke-upon-Trent.

64. DECORATIVE PAINTING, Ornament, by John Slater, Field-place, Stoke-upon-Trent. Price £3 3s.
65. Ditto, by A.
66. Ditto, by Charles Pfänder, 28, Bayham-street, Camden-town, N.W. Price £6 5s.
67. Ditto, after a picture frame in the South Kensington Museum, by the above, £13 10s.

68. WALL MOSAICS, after *Bertini* of Milan, by Samuel Cooper, 2, Waterford-terrace North, Walham-green, W.

69. DIE SINKING, after *Wyon's* "Head of Prince Consort," by W. E. Bartelle, 4, Chichester-place, Wandsworth-road, S. Price £15.
70. Ditto, by J. W. Minton, 9, Royal Mint, E.C. Price £20.
71. Ditto, by Albert Heness, 3, Egbert-street, St. George's-road, N.W. Price £10 10s.

72 GLASS-BLOWING.—Exhibited by Dr. Salviati, 431, Oxford-street, W. Produced by Marco Seguso, of Murano.

73. BOOKBINDING.—After an Italian specimen, "Quintus Curtius," by John Jeffrey, 23, Upper Marylebone-street, W. Price £7.
*74. Ditto, Early Florentine style, "Histoire de la Porcelaine," by Louis Genth, 30, Brydges-street, Covent-garden, W.C. Price £35.
*75. Ditto, "Œuvres de Lorize Labe," by the above. Price £8 8s.
*76. Ditto, case specimen of Mosaic, by the above, £10 10s.

77. ILLUMINATIONS.—Specimen by Charles Pfänder, 28, Bayham-street, Camden-town, N.W. Price £5 10s.
78. Ditto, by Miss Mary R. David, 4, Anderson-street, Chelsea, S.W. Price £5 5s.

SECOND DIVISION.

WORKS TO BE EXECUTED WITHOUT PRESCRIBED DESIGNS.

WOOD CARVING.—(*a.*) *Human figure in the round, in alto or in bas relief. Animals or natural foliage may be used as accessories.*

79. "Egeria," by J. W. Gould, 33, Bayham-place, Camden-town, N.W. Price £15.
80. "Cynthia," by the above. Price £10.
81. "Autumn," Female Head in satin wood, by G. F. Bridge, 3, Vincent-square, S.W. Price £5 10s.
82. A Finial carved in oak, by R. Davison, 28, Winchester-street, South Belgravia, S.W.
83. Original Group in walnut, "Wallace at the Battle of Stirling," by John Lucas, 82, Long-acre, W.C. Price £31 10s.

(*b.*) *Animal or still-life. Fruit, flowers, or natural foliage may be used as accessories.*

84. "Dog's Head," by E. Dujardin, 46, Camberwell-grove, S. Price £2.

(c.) *Natural foliage, fruit, or flowers, or conventional ornament, in which grotesque figures or animals may form accessories, preference being given where the work is of an applied character for ordinary decorative purposes, as representing commercial value.*

85. Panel. "Bird and Flowers," by E. Dujardin, 46, Camberwell-grove, S. Price £10.
86. Panel in Lime Wood, by J. S. Booth, 19, Malden-road, Kentish-town, N.W. Price £10 10s.
87. Chemera Truss Leg, by R. Baker, Messrs. Holland and Sons, Gillingham-street, Pimlico, S.W.
88. Vase of Flowers and Conventional Bracket, by G. H. Bull, 16, Millman-mews, Millman-street, W.C. Price £23.

89 & 90. Design for Damask Table Linen, by Miss A. Kemp, 27, Hereford-square, Brompton, S.W. Price of No. 89, 15s.; No. 90, 10s.
91. Design for a Book Cover, by Miss Mary R. David, Price £1 10s.
92 & 93. Designs for Damask Table Linen, by the above. Price 10s. each.
94 & 95. Works in Oil, by Charles Maiben, 40, West Hill-street, Brighton.

WORKS EXECUTED AND FINISHED BY MACHINE.

Exhibited by Charles J. Hill, 6, Albany-street, Regent's-park, N.W.:—

96—98. Three Groups in Ivory. Price £15.
99. "Head of H.M. the Queen," in Ivory. Price £5.
100. "Greek Head" in Steel. Price £8.
101. Ditto, in Malachite. Price £5.
102. Case with Two Proofs from Engravings on Steel for Surface Printing, and two "Medusa's Heads." Engravings and dies in hand. Price £4 each.

Proceedings of the Society.

FOOD COMMITTEE.

The first meeting of this Committee took place at the Society's House, on Friday afternoon, 21st Dec., Mr. HUGH C. E. CHILDERS, M.P., in the chair. There were also present Mr. John Bell; Mr. Harry Chester; Mr. W. Ewart, M.P.; Mr. W. H. Michael; Lord Robert Montagu, M.P.; Mr. F. Parish; Mr. F. S. Powell, M.P.; Mr. Benj. Shaw; Mr. Edward Wilson; Mr. G. F. Wilson, F.R.S.; and the Rev. C. Wright.

Mr. HARRY CHESTER, having been requested by the Chairman to open the proceedings by an explanatory statement, commenced by saying that, when he moved in the Council of the Society of Arts for the appointment of this Committee, to investigate the very grave and difficult questions with which it was to deal, he was well aware that they could not be satisfactorily dealt with except by a committee selected with more than ordinary care, and presided over by a chairman more than ordinarily capable of guiding them by his experience and wisdom. He was happy to say that the composition of the Committee left nothing to be desired; and that the Chairman of the Committee, the Right Hon. Henry Austin Bruce, M.P., was singularly well-fitted for his post. The subject of the food of the people had for some time past occupied the attention of the Council of the Society, and the circumstances of the present day made it more than usually expedient to take some more definite action upon it. They were all aware that the Privy Council and other public authorities had published statements showing that the people of this country were insufficiently fed; that there was a great want of sufficiently nutritive food. This was not merely a question of humanity and charity; it was a very grave national question, vitally affecting "arts, manufactures, and commerce," and the very sources of national strength. The first thing was to see clearly in what directions this committee could usefully act, and what it must necessarily avoid. Nothing must be done to interfere in any way with the operation of the laws of political economy, nor with the natural action of trade; but the Society of Arts might in this as in other matters do good service by ventilating the subject, by collecting and distributing information, by repeatedly calling attention to the principal needs and the best suggestions for supplying them, by offering medals and premiums for various inventions of improved processes, and generally by bringing the resources of science to bear on the wants and difficulties of those branches of arts, manufactures, and commerce, which are concerned in the production, importation, preservation, and preparation of articles suitable for food. His hope that this was a subject with which the Society of Arts might usefully deal had been greatly encouraged by the cordial manner in which those noblemen and gentlemen who had been invited to serve on the committee had responded to the invitation. The most lively interest had been expressed; and the two or three who had declined to serve had given sufficient reasons for so doing. It would no doubt be observed that, with the single exception of Professor Bentley, a member of the Council, there were no medical men on the committee. This arose from no inability to appreciate the importance of medical knowledge and experience in such a matter, nor from any unwillingness on the part of the medical profession to assist the Committee. From many of the most distinguished members of that profession the heartiest offers of assistance had been received; but the truth was, that the medical experts were so numerous, and perhaps the differences of opinion among them were so considerable, that, if any were invited to serve on the Committee, it would be invidious to select a few, and not desirable to appoint many, for this might give too professional a character to the Committee; it was therefore resolved to seek their assistance rather as witnesses than as judges; and to invite them to state in writing or *viva voce* the results of their knowledge and experience. The Committee had been promised a great deal of very valuable assistance of this kind by many distinguished members of the profession. It would be very important to give the utmost possible publicity to the proceedings of the Committee, and to the suggestions with which it might be favoured. He hoped that henceforth, for some months, every number of the Society's weekly *Journal* would contain some publications from the Committee, so that the subject might be kept constantly in view. The Society had more than 3,000 members, and a large number of Institutions and Local Educational Boards in union with it. To all of these the *Journal* was sent regularly, and it would also be sent to each member of this Committee, whether a member of the Society of Arts or not. He suggested that the co-operation of the principal medical journals, and of the press generally, should be invited. Slips of what the Committee proposed to publish in the Society's *Journal* might be sent simultaneously to all such journals as might be willing to assist in ventilating the subject. The Board of Trade was in possession of a vast amount of valuable information upon points into which they would have to inquire; and he was authorised by Sir Emerson Tennant to say that all such information, and all such assistance as that Board could afford, would be most cordially afforded to the Committee. The Secretaries of State for Foreign Affairs, the Colonies, and India, would doubtless assist the Committee by circulating queries among her Majesty's ministers and consuls, governors, and other functionaries, respecting articles suitable for food, or modes of preparing it, which might be useful to this country. The

Acclimatisation Society had already received some valuable information of this kind through the Foreign Office, and he was sure that that Society would readily place it at the disposal of this Committee. The subjects of inquiry might be said to be of almost unlimited extent, and it was desirable to indicate at the outset a few great divisions of the subject on which it might be most useful at first to enter. It would not be well to enter upon such branches of the subject as were calculated to excite popular prejudices, such, for example, as the introduction of horse-flesh as an article of food for the lower classes. The Committee were aware that this was a subject of great interest just now at Paris. It might or might not hereafter become popular in this country, but at present the mere mention of it would tend to excite an uncontrollable prejudice against the Committee. There were four great subjects with which he thought the Committee might advantageously begin to deal:—Meat, fish, milk, cooking. The first great principle, he had almost said, of Christianity as well as of political economy appeared to be that all the world should be kin, that each part of the world should contribute to supply the wants of the rest. The home supply of meat for the population of these islands was not nearly sufficient for the due sustenance of one-half of the population. The supply of live cattle from foreign parts could never be equal to the want. Fresh meat in the natural condition could only be procured from foreign countries to a limited extent, that is, from neighbouring countries, and in favourable weather. On the other hand, millions of tons of beef and mutton were wasting in distant quarters of the earth; and science was required to devise means for so dealing with that beef and mutton that commercial enterprise might be enabled to bring it to this country in a condition suitable for food. This was an object of enormous importance. It had long occupied the attention of the Society of Arts. In 1853, when delivering the centenary address, as Chairman of the Council, he (Mr. Chester) had alluded to it, and asked why Australia should export only the wool and tallow of the sheep, and not the mutton itself to the hungry masses in this country. Of late years, no session had passed without the Society's taking some measures to call public attention to this subject. Almost every patented and other invention for preserving meat had been described, and many of them had been exhibited, in the Society's great room. In 1863 the Society had offered a medal and a prize of £70 provided by the liberality of Sir W. C. Trevelyan, a member of the Society.* Various claims had been submitted to the Council, but no award had hitherto been made; and he understood that the Council would be glad of the assistance of this Committee in making the award. To this important point, then, their attention would be turned at once. They saw daily advertised not fewer than three different kinds of *extractum carnis*, all claiming to be Liebig's *extractum*. He believed that there was not much doubt as to which of the three was the genuine article; but the Committee might might cause them all to be analysed, and might give the results to the public. So much attention had lately been given to the importance of preserving and increasing the supplies of fish, that he need merely to indicate that snbject as one which would abundantly reward inquiry. Mr. Ewart, and other members of the committee who flourished in the ante-railway period, must remember the immense vans, with high wheels, that used to bring fish daily to London from the Kentish and Suffolk ports. They were thought to travel at a wonderful rate, and they were called into existence by the Society of Arts, which had offered medals and prizes, and otherwise excited a spirit of enterprise "for the better supplying of the metropolis with fish." The better supply of milk was a vital question. He did not now allude to that fearful source of mortality among the infant poor, the deficiency of breast milk. He alluded to the fact that, as a general rule, the working classes of this country, even in dairy districts—and perhaps more there than elsewhere—were unable to procure the milk diet which was necessary to the growth of healthy bodies. In some districts there was an absolute insufficiency of milk; in others there was an abundance of it, but it was turned into butter and cheese, and the poor could get none to drink. He believed that the Ladies' Sanitary Association had published some useful suggestions for dealng with the latter case; and, if so, the Society of Arts might with advantage give additional publicity to those suggestions. There was plenty of kind feeling in England, but people did not always know "how to do it." It had struck him as somewhat unfortunate that, while the supply of milk, as milk, was insufficient for the wants of the people of England, such large quantities of English milk should be converted into cheese. Cheese, of course, was a valuable article of food, very nutritious to those who could digest it; but cheese might be brought from a distance, while milk could only be consumed, as milk, within a very limited area. Mr. J. C. Morton in his paper on "London Milk," last session,* had stated that the quantity of milk consumed by the three millions of London people was less than half the amount that, according to a good standard of food, they ought to consume; also that this was true of a very wide extent of agricultural populations; that the transit of milk by railway was injurious to it; and that consequently country-raised milk was worth less per gallon in London than London-raised milk. He gave a table showing the milk-consuming rate of various populations, and it appeared that in Devonshire the quantity of milk consumed was considerably greater per head than in any other English county. Could this superiority be a result of the common Devonshire practice of preserving the milk by clotting it? He thought that the Society of Arts might usefully press on the railway companies and milk producers the great importance of improving the present very unsuitable milk vans on which that delicate and valuable commodity was now savagely transmitted to the metropolis. He thought also that the Society of Arts might offer its medal and a valuable premium for the best method of preserving milk, so that it might be sent from greater distances than at present. Much milk, which was now necessarily converted into cheese, because it could not be kept from spoiling as milk, might then be more beneficially and profitably consumed as milk. Mr. Foster had told him of a French invention for the preservation of milk; and said that he had tasted some milk thus preserved for three years, which was perfectly sweet, and could not be distinguished from fresh milk. The Committee would do well to acquaint itself with that invention; and, if it were open to any serious objection, the Society might do good service by offering a medal and a valuable prize for a better method of preserving milk. He knew that, after all, the commercial principle, the hope of gain, was the best stimulus to invention: but all experience showed, the experience of the Society of Arts proved to demonstration, that these offers of medals and prizes had useful effects. To this day the medals granted at the Exhibition of 1851 were paraded in advertisements of all sorts of articles that were offered for sale; and this was done not merely by petty chapmen of no reputation, but by tradesmen and manufacturers of world-wide eminence. An article *medalled* by the Society of Arts was sure to command a market. On the subject of cooking he would

* The terms of the offer are as follows:—"The sum of £70, placed at the disposal of the Council by Sir W. C. Trevelyan, Bart., with the Society's medal, is offered for the discovery of a process for preserving fresh meat better than by any method hitherto employed, applicable to the preservation of meat in countries where it is now almost valueless, so as to render it an article of commerce and available for stores on ship board. Specimens, with detailed accounts of the process employed, must be sent to the Society."

* *Journal*, vol. xiv. p. 65.

not say many words. The Committee well knew how deplorable was the cooking among the lower, indeed among all but the highest, classes in this country. A valuable paper* had been read and well discussed before the Society of Arts, on the admirable system of "Cooking Depots," introduced at Glasgow by Mr. Corbett. That was one of the greatest boons that had been conferred on the working classes. The same system had been introduced successfully at Manchester. An attempt had been made in London, but unhappily without success. He believed that it had failed, so far as it had failed, from no inevitable causes, from no local peculiarities. There seemed to be no reason why the same system should not be carried out, on a very extended scale, in London as elsewhere; and the Committee might do a good work in collecting and collating experience on the subject, and in calling attention to it, until a second Mr. Corbett should arise with wisdom and energy enough to acclimatise the Glasgow product in the metropolis. The Committee might also represent to the Committee of Council on Education the great importance of providing instruction in cooking for the poorer classes. This surely was a subject well worthy of the notice of Her Majesty's Inspectors of Schools. This was a matter which the Society of Arts had long regarded as important. In the Society's great scheme of educational examinations, designed to encourage the education of adults among the working classes of both sexes, domestic economy held a prominent place. In that subject the Dean of Hereford was examiner. In his outline of the examination for 1867, were included "the nutritious properties of food, animal and vegetable; modes of cooking, &c.," and a benevolent member of the Council, Mr. T. Twining, had taken measures to supply a systematic course of lectures to the working-classes in different parts of London. Having particularised these four great subjects of meat, fish, milk, and cooking, he would not longer detain the committee, though he was aware that there were an almost infinite number of other useful subjects which might be specified. There were, for example, the great cereal class, vegetables of various kinds, as well as fruits, little known, but capable of being much used in this country, and that scandal of civilisation, the adulteration of food. He would now propose that the Chairman, Mr. Bruce, should be supported by two Vice-Chairmen, who might take the chair in his absence, or at Sub-Committees; and he would move that Mr. Childers, M.P., and Mr. Benjamin Shaw, a member of the Council, be the Vice-Chairmen.

This motion having been seconded was carried unanimously.

The following gentlemen were then appointed a Sub-Committee to collect information and materials, and generally to prepare for the transaction of the business of the Committee when it shall meet in February, viz.:—The Right Hon. Henry Austin Bruce, M.P., Chairman of the Committee; Mr. Childers, M.P., and Mr. Shaw, Vice-Chairmen; Professor Bentley, Mr. Harry Chester, Mr. Michael, Mr. Consul Parish, and Mr. Edward Wilson.

A general conversation respecting the objects of the Committee, and its modes of proceeding, then followed; in the course of which Mr. Michael described an invention for preserving milk which he thought successful. The milk was dried in oscillating vessels; and in that state was easily transportable, and might be kept for a long period. This method had been successfully adopted at Lord Northbrook's, and was about to be introduced on a large scale at Zurich in Switzerland.

Mr. HARRY CHESTER said that probably that invention was little known; and, if it were really valuable, this Committee might direct attention to it, but all plans for drying milk were somewhat elaborate and costly; and what he had principally in view in his remarks on milk were means for preserving it, not during long voyages, but during such brief periods as would allow milk in its natural state to be sent to London, for example, from greater distances than was possible at present.

Mr. BELL said that, remembering the caution which they had received against running foul of popular prejudices, he would say nothing about edible snails, though the Committee knew that many drooping lives had been saved in foreign countries by the use of that singularly restorative diet. He hoped, however, that the great family of molluscs would not be entirely overlooked by the Committee, and he drew attention to various other articles much used as food on the Continent, but little known in these islands.

Mr. SHAW enlarged on the great importance of the objects for which the Committee had been formed. He said that, from his conversations on this subject with many medical men of eminence, he felt assured that any material improvement in the diet of the people would show itself unmistakably in their health and strength; and would not only enable them to resist better than at present the attacks of cholera, typhus, and other epidemics, but would diminish sensibly the mortality from consumption, heart disease, and other maladies which were in a great degree the consequences of an imperfect nutrition.

The Committee then adjourned.

The sub-committee met on Friday, the 28th Dec., at 4 o'clock; and is to meet again this day, Friday, at 3 o'clock.

The following memorandum has been furnished by a member of the Committee:—

Mr. Simon, the principal medical officer of the Privy Council, says, "That no sanitary necessity can be more real than the common animal need of proper food—that no morbific influence can be of worse import to life than mere privation of nourishment. These are propositions which every one feels to be true, when they are illustrated in individual cases of death by starvation, or in those national extreme sufferings of scarcity which constitute famine. But the propositions are not exclusively true in that utmost range of their application. In degrees far short of what is popularly known as starvation or famine, insufficiency of nourishment may bring very hurtful consequences to health. Local defects or local peculiarities of diet may exercise important influence in determining or colouring particular localisations of disease; and, generally, it may be said that, in order justly to estimate the sanitary circumstances of a people, scientific regard must be had to the quantity and quality of the people's meat and drink."

This being so, let us see what are the facts in respect to large classes of the English people.

In 1863, the Privy Council ordered an inquiry to be made into the diet of the lowest-fed classes of the population, and in order to take the most moderate standard of comparison, the estimate adopted as to the minimum quantity of food on which life could reasonably be expected to exist was derived from what had been adopted as a practical rule for allowances to the poor during the cotton famine in the North. The rule then laid down was that, to avert starvation diseases, the weekly food of an average adult must contain at least 28,600 grains of carbon and 1,330 grains of nitrogen. The annexed table (see next page), therefore, speaks for itself:—

In only one of the examined classes of indoor operatives did the average nitrogen-supply just exceed, while in another it barely reached the estimated standard of bare sufficiency, and in two classes there was defect—in one a very large defect—of both nitrogen and carbon.

Turning from these to the agricultural population, we find that the inquiry tended to show that more than a fifth of the examined cases had less than the estimated

* *Journal*, Vol. xi., p. 199.

Class.	No. of Families examined.	Average weekly supply for each adult.	
		Carbon.	Nitrogen.
Silk-weavers	42	27,620	1,151
Needlewomen.....	31	22,900	950
Kid-glovers.....	10	28,623	1,213
Shoemakers.....	21	31,700	1,332
Stocking-weavers ..	21	33,537	1,316
Average.....		28,876	1,192
Minimum allowance advised for unemployed cotton operatives		28,600	1,330

bare sufficiency of carbonaceous food, while in three counties insufficiency of nitrogenous food was the average local diet.

These results are put forward by Mr. Simon as approximate only, but in their general character they derive abundant confirmation from other testimony, and there can be little doubt that their substantial truth is beyond question.

Dr. Brown, in a little work on "The Food of the People," published 1865, says:—"The plague-spot, the skeleton in the closet of England is, that her people are underfed. When I make this declaration it will be at once understood that in speaking of people, I do not speak of the upper classes, of the middle class, or of highly-skilled artisans, who may be said to be in a state of transition—to be passing from the labouring into the middle class. I speak of the strictly labouring class and their families. My opportunities of observing this class have been by no means narrowly limited. For a long series of years I have been physician, and I trust not an unobserving one, to two great charitable institutions, each of them in a populous sea-port, comprising various manufactories, and, of course, many of the labouring class—the Sunderland Infirmary and Dispensary, and the South Shields Dispensary. In my attendance on these charities I have observed, and not without a feeling of pain, the diminishing power of English women to suckle their offspring," p. 2. Coming to the defective constitution resulting from this under-feeding, he observes:—"It is transmissible from sire to son, and is the great instrument in producing that deterioration of a race . . . which is the concomitant and cause of the decay of states. . . . We must all see that England requires for the security of her shores a well-fed and vigorous people, and that all the thought and energy she can boast should be employed for a time on the food question." p. 10.

Dr. Blakiston, of St. Leonards, in his recent work, "Clinical observations on diseases of the Heart, &c.," says:—"I cannot conclude this subject without offering a few remarks on the prevention of diseases. It has been seen that those under consideration, in common with many others, arise from a morbid state of the blood. Setting aside the influence of hereditary transmission and individual habits of life, it is clear that the condition of the blood mainly depends on that of the air breathed and the food consumed. Great efforts are being made to purify the air by improvements in drainage, ventilation, and the construction of dwellings; and much attention is bestowed on the diet of the soldier and sailor, and of the inmates of workhouses and gaols, but that of the labouring classes generally, more especially as regards the consumption of animal food, is far from being in a satisfactory state. Is it not possible to increase this supply, and economise what we already possess? How can the members of our profession be better employed than by joining to promote this good work? First, by giving their aid and counsel to devise means for the supply of nutritious food, and for making the best use of that which is already within reach; and secondly, by assisting the clergy and laity to instruct the wives and families of the working classes to avail themselves of the advantages which may be afforded to them. By thus throwing ourselves heart and soul into this benevolent work, we shall increase our usefulness and raise our profession greatly in the estimation of the country at large."

PARIS UNIVERSAL EXHIBITION OF 1867.

BRITISH SECTION.

A distinct order of reward, of which particulars have already appeared in the *Journal*, has been "instituted in favour of persons, establishments, or localities, which, by a special organization or special institutions, have developed a spirit of harmony among all those co-operating in the same work, and have provided for the material, moral, and intellectual well-being of the workman."

These rewards consist of ten prizes, of the total value of 100,000 francs (£4,000), or £400 each, and twenty honourable mentions. One grand prize of 100,000 francs may, in addition, be awarded to the person, establishment, or locality, distinguished under this head, by a very exceptional superiority.

At the first meeting of the International Jury, held at Paris, 1st December, 1866, the following principles were adopted:—

1st. The Jury may doubtless take into account, among the facts presented for its consideration, the spirit of charity and beneficence; but it is not specially charged to reward acts of that character.

2nd. To constitute them the basis of a claim to reward, the facts adduced must have been the consequence of a free and spontaneous initiative, and not of legislative enactments.

3rd. It will not suffice that the work be praiseworthy in itself; it must at the same time be compatible with sustained and progressive prosperity.

4th. The circumstances of the position in which competitors may be found should be duly considered. To have maintained intact traditional circumstances of harmony and happiness, whilst progressing in agricultural or industrial pursuits, is a good ground of claim; but the introduction of improvements where antagonism and suffering previously existed is not less meritorious.

5th. The Jury has not thought it right to exclude from the competition individuals or societies which, although not engaged in agricultural or manufacturing pursuits, have founded durable and prosperous institutions, contributing to the propagation of good feeling and happiness, of which it is desirable to seek the best examples.

The following form must be filled up by or on behalf of any person, establishment, or institution, in the United Kingdom, for which the reward is claimed, and must be forwarded to the "Secretary, Paris Exhibition, South Kensington Museum," on or before the 20th January, 1867.*

I.—General Questions which apply to all cases:—

1. Name of the establishment:
   Where situated:
   Full postal address:
2. Name of the proprietor, or body of proprietors:
3. Name in full, description and address of the correspondent or Secretary of the Institution:
4. Principal object of the establishment:
5. By whom was it formed?
6. When was it established?

* It is desirable that the questions should be answered as far as possible; but it is not imperative that all should be filled up; and there are cases in which the whole are not applicable.

7. Have the works or the institution ever been suspended? if so, for how long, at what date, and from what cause?

8. State the number of persons at present employed, or received into the Institution—Adult males, ; females, . Young persons within the ages of and , males, ; females, . Children, males, ; females, . And the average number in each during ten years:

9. Are there any restrictions or qualifications for admission or employment in labour: namely,—

Age, and at what age? Instruction?
Apprenticeship, or other period of service?

10. What is the proportion of married females employed?

11. What regulations are made to enable them to attend to their family and domestic duties?

12. Are any arrangements made for the protection of young females whose employment necessitates their leaving home?

13. Has the establishment been remunerative or otherwise?

14. Is any pecuniary assistance received from the Government, or from any other body not participating in the profits? If so, define its nature and amount.

15. Has the establishment any special privilege, or monopoly of any kind, and what is its nature?

15*a*. Enclose a copy of all rules framed for the government of the establishment, or any information which may specially refer to it, and any plans of the buildings.

II.—Establishments where any description of Manufacture or Productive Labour is carried on, state—

16. Of how many partners does the establishment consist?

17. Is their pecuniary responsibility limited?

18. Is the capital divided into shares, or owned in parts? If so, how many, and of what amount, or in what proportions?

19. During the last five years, what has been the average yearly profit per cent., and in what proportion, and according to what principle, has it been divided among—

1. The partners, or shareholders.
2. The workpeople.
3. Any other person.
4. Devoted to capital, or other purposes?

20. What are the daily number of hours of work at the establishment, exclusive of meal-times?

21. What are the average weekly wages now earned?

By a family—
By a workman—
What are the highest weekly wages? What are the lowest?

22. Have any, and what, systems been adopted (payment by the piece or other) to stimulate the industry of the workpeople?

23. Have dwellings, at the cost of the establishment, been provided for the workpeople? Of what character? When erected? How many? And at what cost?

24. What are the average weekly rents paid for such dwellings?

By a family—
By a single workman—

25. Are any, and what, regulations made and enforced relative to periodical cleansing of the dwellings and workshops?

26. Is there any co-operative society, or arrangement amongst the workmen for the purchase of food or clothing, and how is the management provided and paid for?

27. Do the employers contribute in any way?

28. Is the system of truck in any form adopted? Are any payments made except in money to persons employed?

29. Is any provision made by the proprietors, or by the workpeople themselves, for medical attendance in cases of sickness; and are any, and what, allowances made to them, or in cases of death for their burial, and from what funds?

30. State the proportion, to the average of the locality, of the

Deaths of the workpeople employed—
Their marriages—
Births— Legitimate, ; illegitimate,

31. State the average duration of life of the workpeople?

Adult males, . Adult females, Children,

32. State if any, and what, provision is made for the education of the workpeople and their children, and from what funds provided.

33. State what provision is made for their religious teaching.

34. State what provision is made for their mental or physical recreation.

35. Is any arrangement made to promote temperance, and what proportion of the workpeople avail themselves of it?

36. Are any plans adopted for taking charge of the savings of the workpeople?

37. How long have they been in operation?

38. What is the number of the contributors, and the average amount of their savings?

39. Are there any instances of savings invested in life assurance, and to what extent?

40. Have any, and how many, of the workpeople, by means of their savings, become possessed of houses?

41. Have they joined any trades' union, or formed any such union among themselves?

42. Have such unions had any, and what, influence upon their hours, or modes of labour, or their rate of wages?

43. Have there been any strikes among the workpeople?

44. State at what period? Of what duration? And the alleged causes?

45. By what means, and on what conditions, were they terminated?

46. Have any trade union interfered with the management of the establishment? And if so, give all particulars.

47. Has the establishment given rise to any hostile combinations among the manufactures or workpeople of the locality?

48. Has it had any, and what, effect upon the poor's rate of the parish?

III.—If the Establishment be one in which no Manufacture or Productive Labour is carried on, or forms part of the plan, state—

49. The express nature and objects of the institution.

50. By whom is it managed?

51. What is its gross annual income, and whence derived?

52. What are the annual expenses of management? And of collection where subscriptions are paid?

53. What are the number of paid officers?

54. And their salaries?

55. The conditions on which the inmates are commonly received, and the average duration of their stay in the institution.

56. The weekly cost of the inmates per head. If entirely, or in what proportion, it is defrayed from the funds of the institution, or in what other way.

57. Is any, and what, money allowance made to the inmates, and any, and what, gratuity given to them on leaving the institution?

58. State what has been the total yearly cost during the last five years?

59. Answer as in previous questions with regard to

Sickness (No. 29.)
Education (No. 32.

Religious Teaching (No. 33.)
Recreation (No. 34.)
Temperance (No. 35.)

60. What has been the average sum spent, under each of these heads, during each of the last five years?

61. By whom, and under what control, are the funds managed?

62. Have you any other information to offer on this subject, or in regard specially to your establishment?

Signed by { _____ *Owner.* / _____ *Manager.* / _____ *Public Officer of the Establishment.*

We certify that we are well informed of the management of the above establishment, and that we believe the foregoing statements to be true.

_____

_____

_____

N.B.—The above certificate must be signed by at least two of the magistrates, or one magistrate and clergyman, or other well-known person residing in the locality.

NEW MUSEUMS IN FRANCE.

Rich as Paris and some other parts of France are in museums and public galleries, the list of these establishments will shortly be increased by three special museums of antiquities. After some delay, arising out of the requirements of the law respecting property belonging to minors, the authorities of the city of Paris have obtained possession of the Hôtel Carnavalet, in which is to be established a museum of civic antiquities and curiosities. It is situated at the east end of the town, in the Rue Culture Sainte Catherine, near the Place Royale, and, like the building in which is contained the famous museum of the Hôtel Cluny, has of itself a special antiquarian interest. It was erected soon after the year 1544, when Jacques de Ligneris, Lord of Crosnes, and President of the Parliament of Paris, purchased of the monks of the Val des Ecoliers five fields, in which to build a mansion. Pierre Lescot, Abbot of Clagny, furnished the plans for the building, which was erected by Jean Bullant. The work must have been pushed on with rapidity, for in the year 1547 the famous sculptor, Jean Goujon, was engaged on the decoration of the great door. Over the door, on the outside, was the coat of arms of the proprietor of the mansion, supported by two children; arms and trophies enriched the pediment, and over the key stone of the arch was one of those genii, or winged figures, in which Jean Goujon has never perhaps been equalled, certainly never surpassed, by any sculptor of modern times. In the vestibule is a figure of Fame, with two other winged figures above, bearing triumphal palm branches; and here were also two bas-reliefs of lions supporting the arms of the Ligneris family, all the work of Jean Goujon. The Fame and attendant figures still remain in their original position, but the lions were afterwards transferred by Mansard to the outside of the building, where they still are to be seen on the right and left of the pediment. Goujon also executed a colossal group, representing the four seasons, in the court-yard of the mansion. The ornamental sculptures were the work of Ponce Trébati, a Florentine sculptor. The Lord of Crosnes died in 1556, and the Hôtel Carnavalet remained only thirty years in possession of his family when it became the property of Françoise de la Baume, dame de Carnavalet, by whose name it has since been known. It remained in the lady's family about a century, when it was purchased by M. d'Agaurry, a rich magistrate of Dauphiny, who caused it to be restored and enlarged by the architect, Androuet du Cerceau; lastly, the edifice was again restored in 1634 by Mansard, the architect of Louis XIV.

For twenty years the Hôtel Carnavalet was the residence of Madame de Sevigny, and was the resort of all the wits of the period. At last it became the property of M. Verdot, who there established the institution bearing his name. It is now the property of the city of Paris, and its fine apartments will doubtless soon contain an interesting collection of civic antiquities and souvenirs. Several collections have been purchased, and presented for the future museum, and objects of interest are being constantly acquired. Amongst these is a picture representing the Hôtel de Ville and the surrounding buildings as they stood at the beginning of the sixteenth century, presented to the city by M. Vandermarcq, and a number of original designs of public works executed in Paris in past times. The Hôtel Carnavalet cost the city of Paris 900,000 francs (£36,000).

The city authorities have also just created a special bureau in connection with architecture, the fine arts, and public fêtes, with a view, apparently, of giving to the management of such matters more attention and administrative unity. M. Michaux, chef de bureau in the private office of the Prefect of the Seine, is appointed to this service.

The formation of a general museum of French antiquities in the old château of Saint Germain, which is being restored in the style of the original building, has already been mentioned in the *Journal*, and the work is expected to be completed in two or three years.

The establishment of a third new museum is only just announced. M. Viollet le Duc is engaged in restoring the curious old château of Pierrefonds, near Compiègne, by order of the Emperor, and it is said that another museum of antiquities will be established within what remains of that old feudal edifice which figures so often in the past history of France. When all these plans are completed, France will possess in its capital, and at two points at a considerable distance from Paris and from each other, three establishments for the preservation of the material records of her past history and art so long neglected, and now so studiously preserved.

The museum of Saint Germain will, probably, be confined to illustrations of the Gallo-Roman period, in which case, doubtless, the new museum of Pierrefonds will be devoted to more recent Gallic antiquities.

Fine Arts.

M. HEBERT—the painter of several beautiful and well-known works, amongst which are "Malaria," "The Woman at the Well," and other charming studies of Eastern and Italian life, and many exquisite portraits, real and imaginary—has been appointed to succeed M. Robert-Fleury as Director of the French School in Rome.

ART AND ART-EDUCATION IN PARIS.—The Municipal Council of Paris announces that, in order to prevent Parisian manufacturers from losing their well-earned reputation for works of elegance, the teaching of drawing is extended to 122 commercial schools, male and female, and to 32 adult schools. A sum equal to £33,466 is devoted to architectural works and the fine arts, of which amount nearly half is for decorative purposes.

ROUEN EXHIBITION.—This exhibition, as before stated in the columns of the *Journal*, is one of the most important in France, and becomes more so every year—

the authorities of the town and the local society of the Friends of Art vying with each other in encouraging artists to exhibit in the old capital of Normandy, a country which has produced a large number of painters, and has furnished subjects for pictures innumerable. The exhibition which has recently closed was the largest yet opened by the society, and the sales have also exceeded those of any former year. The great gold medal, of the value of £40, was awarded to M. Charles Landelle, a painter whose style resembles somewhat that of M. Hébert, for a replica of a beautiful work, the "Fellah Woman," which was one of the attractions of the Paris salons last year, and which was purchased for the Emperor's private collection. There were six other gold medals given, the donors being—the Emperor, the Department of the Seine Inferieure, the town of Rouen, the Society of the Friends of Art, the Imperial Academy, and the Society of Emulation—all of Rouen; the Society of Horticulture gave a silver-gilt medal. The names of the other medallists will show that many eminent artists send their works to Rouen; they are, MM. Layerges, De la Rochenoire, Ribot, Achille Zo, T. A. Weber, Tabar; Mdlle. Morin (daughter of the Curator of the Museum of Rouen); MM. Cugnot, sculptor; L. C. Duchesne; and Madame Puyroche Wagner. The total amount of sales was about £1,600. The authorities of the town purchased for the Museum a fine picture of Stamboul, by Ziem; a beautiful landscape, by Daubigny; and three other works. The Society of the Friends of Art acquired forty-two works, amongst which were pictures by Weber, Zo, and other well-known artists, and a bronze figure of "Scapin," by Doublemard. Twenty-eight works were purchased by private persons, not members of the society. Such is the result of a few years' perseverance, and of the continued action of the authorities and of the friends of art. The provincial exhibitions of France now form a source of steady income for artists, and especially for those who are still struggling on, or gradually rising to eminence.

NATIONAL PORTRAIT GALLERY.—The small rooms in Great George-street, Westminster, in which are still stowed away 225 portraits, were filled to overflowing by holiday-keepers during the Christmas week. On "boxing day" 860 people passed through the gallery. Their view of the pictures was of course hurried, but their conduct was orderly. At Christmas times a printed list of the portraits, including dates and the names of the painters, is presented gratuitously at the door. This synopsis of the larger catalogue is supplied, at the expense of the Government, from Her Majesty's Stationery Office. The most recent additions to the gallery are portraits of George III. and Queen Charlotte, by Allan Ramsay; Lord Lovat, by Hogarth; and a bust of Richard Cobden, by Woolner. The last is not among the purchases, but a donation. A replica of the bust has been sent to Paris. "Lord Lovat beheaded on Tower-hill" is the well-known engraved portrait. The execution is rude, but the character has been seized with the point and force peculiar to Hogarth. With the fresh acquisitions constantly made, the rooms in Great George-street become each year more inadequate to the display of the collection. Since the decision of the House of Commons last session to retain the pictures of the old masters in Trafalgar-square, the idea has naturally been revived of uniting under one roof the National Gallery and the National Portrait Gallery. Should this plan be adopted, changes in management and arrangement will be involved. It has sometimes been objected to such a measure that the object and character of the two galleries are dissimilar, that a portrait gallery does not regard merit in art, but solely authenticity in likeness. Yet whatever be the final decision, all agree that the existing and still growing collection now housed at Westminster must obtain more spacious quarters. The Gallery is only in its infancy. At South Kensington there will probably have been exhibited, in the course of the last, the present, and the coming year, not less than 3,000 portraits illustrative of English History. The collection now at Westminster does not reach 300. Persons most interested in the National Portrait Gallery hold the opinion that, could it obtain adequate space for expansion, its growth would become rapid.

BRITISH ARCHITECTURE AT THE PARIS EXHIBITION.—A preliminary exhibition has been held at Kensington, in the first room in the gallery recently occupied by historic portraits, of about 200 architectural designs. From this collection are selected from 40 to 50 drawings, which it is supposed may best represent, in Paris, the progress made by architecture in this country. Prominently among the designs so selected may be enumerated the following:—The Manchester Assize Courts, by Alfred Waterhouse; restorations of the London Guildhall, by Horace Jones, and of St. Stephen's Crypt, by Edward Barry; St. Giles's Schools, also by Edward Barry; Houses of Parliament, Sydney, by Mr. Lynn. Of Albert Memorials will be sent to Paris the non-accepted designs of Charles Barry, of James Fergusson, and of Professor Donaldson; while the design by Gilbert Scott, now in course of erection, will not be sent. Of Captain Fowke's design for completing the International Exhibition building of 1862; of the drawings for the new Museum of Science and Art, now in course of erection at South Kensington; and of the various designs for the projected Museum of Natural History at South Kensington, it does not appear that any record will be made in Paris. It does not seem that Captain Fowke or Godfrey Sykes will be represented. Still further, there are no designs by Mr. Gilbert Scott, Mr. Street, Mr. Hardwick, Mr. Burges, Mr. Butterfield, and some half-dozen other best-known architects. It has been stated, however, that certain additional drawings will be obtained, in order the more fully to represent the modern school of English architecture in the approaching Paris Exhibition.

Manufactures.

SUGAR FOR BREWERS.—The great scarcity of both English and foreign barley fit for malting purposes, has compelled some of the brewers to purchase low sugars for brewing purposes. That really fine barley will be a scarce commo lity for several months, is evident from the damp condition in which the bulk of the crop has been secured. The result of an inferior crop of barley is, that the best parcels are worth 54s. and even 56s., and the best pale malt, so much required by the pale ale brewers, 80s. per quarter. With the exception of about 20,000 quarters of fine barley imported year by year from the Danish Islands, the whole of our vast supplies, from the Continent and elsewhere, are composed of qualities only fit for grinding and distilling purposes. Continental countries do not produce a quality of barley which can be converted into good saleable malt.

MINERAL WATERS. — The manufacture of mineral waters in Paris dates back about twenty years. The industry consists in the introduction into ordinary water of carbonic acid gas, formed by a mixture of sulphuric acid and chalk. The digestive action of aërated water, under the name of seltzer water, has brought it largely into use, and the consumer now finds it at hand in all cafés, restaurants. and wine-merchants. It is sold in syphons, in glass, or in stone bottles. An addition of sugar, lemon, or other flavouring substance, produces the ordinary limonade gazeuse, orangeade, and other analogous drinks, of which there is a large consumption in the cafés. There is also a great sale of effervescing powders, consisting of proportions of bicarbonate of soda and tartaric acid, in small packets, permitting the consumer to make his own gaseous beverages. This has given rise to the invention of different apparatus suited to the preparation of these beverages. In Paris there are six steam engines, of 47-horse power

in the aggregate, and 372 workmen employed in this manufacture. The extent of the wholesale trade carried on is about £80,000 per annum. New improvements are continually made in the apparatus and appliances used for preparing and bottling these waters. The sale of lemonade is one of the most prosperous in Paris. The number of *cafés* increases daily, and the restaurants, the singing saloons, and other places of public resort, for which Paris is noted, largely increases the consumption. In 1860 there were 2,200 vendors of lemonade and ices in Paris, employing 4,100 persons, and the annual sales reached £2,500,000.

THE IRON TRADE.—According to the ironmasters' returns, just made, the quantity of pig-iron produced in 1866 in Scotland was 994,000 tons, showing the striking decrease of 170,000 tons as compared with last year. The deliveries per railways, the shipments foreign and coastwise, combined with the local consumption, were 1,136,000 tons, and show a falling off, when compared with the preceding year, of 136,000 tons. As certified by the committee appointed by the trade, the stock of pig-iron is now 510,000 tons, thus exhibiting the marked decrease of 142,000 tons as contrasted with 1865. During the year the price has fluctuated from 82s.—the highest point reached in April—to 51s., the lowest to which it fell, in May, averaging 60s. 6d. per ton, against 54s. 9d. per ton last year. The malleable iron-works, the foundries, the ship-building yards, have felt the languor of the depressing influences which generally prevail. Taking into consideration the steady annual accumulation of the wealth and resources of the British Empire, there is reason to hope for a considerable improvement in the iron trade in the present year.

CORAL FISHERY ON THE COAST OF THE ISLAND OF SARDINIA.—Coral is obtained in large quantities in the Mediterranean. The French have from time immemorial carried on the fishery for this precious zoophyte off the Algerian coasts. Coral is also an important branch of industry and commerce in Italy. That which is obtained from the Sardinian coasts is chiefly found in the shallow waters near Carloforte; Alghero, a province situated on the west cost of the island; and the island of Maddalena. At Alghero, where the growth of coral is the most plentiful, it may be estimated that 190 vessels, of which 150 are Neapolitan, 20 Tuscan, and 20 Sardinian—manned by 1,930 sailors—are employed in this fishery, which begins in the month of March and ends during the month of October. The rose coral, which is the most prized, is sold at very high prices, as it is entirely a fancy article. £80 was paid a short time ago for a piece of uncommon beauty weighing nine ounces. The ordinary price is about £24 per kilogramme. The price of red coral is about £6 per kilogramme. The white coral, the quality of which is often deteriorated by being worm-eaten, is sold at about £2 8s. per kilogramme, and the *ferraglio* at 5s. per kilogramme. The greater part of the coral is brought to Torre del Greco, near Naples. The Sardinians and Tuscans send the produce of their fishery principally to Genoa and Leghorn. The value of the coral obtained each year amounts to £60,000. From this must be deducted £45,800 to defray the expenses of the fishery, so that there remains a net profit of £13,000.

MANUFACTURE OF WINES CALLED "VINS DE PAILLE" IN FRANCE.—The manufacture of these wines is almost unknown beyond those districts in Alsace where it is carried on. All grapes are not suitable for the manufacture of "vins de paille," and it is necessary that the vines should be grown in soils that are suitable for the cultivation of wheat, and for this reason the manufacture of this wine is carried on only in certain districts. At the time of the vintage, the grapes are gathered and loaded with care, and carried to the press-room, where they are spread upon straw, but frequently they are hung upon sticks or cords, with which every corner of the building is furnished, and these grapes may even be found hanging in lofts and passages of the building. This last place is more advantageous, as the grapes are more easily examined than when spread upon straw; with a little care they may be kept until the proper time for being picked, almost entirely free from rotten ones. The manufacture takes place towards the end of the month of February, and the bunches of grapes are again examined before picking; those that are simply rotten are kept, whilst the mouldy ones are thrown away. They are then trodden in small quantities in small tubs, as the grape being in a state of semi-desiccation it cannot be completely crushed, the centre of the mass resisting like an elastic body. The pressed grapes are then heaped up in a cask, and four and twenty hours afterwards the fermentation will have sufficiently softened the mass to permit its being passed through the press. For the manufacture of this wine it will be seen that almost a princely fortune is necessary. A cask of "vins be paille" requires for its production a quantity of grapes which, previous to their desiccation, would have produced ten casks. This wine, destined for royal tables or for the episcopal tables of Germany, does not attain its maximum quality until it has been kept at least a dozen years, and after fifteen years its quality is still better. It is curious that, after all this time, it is neither oiled, racked off, nor fined. Racking would be difficult, and the loss excessive, if it was applied to a syrupy liquid like molten gold. As to the oiling it is not necessary, as this wine contains so much sugar that the air has no effect upon it. The skins of the grapes are sometimes distilled. It will be understood that, as these wines contain so large a proportion of sugar, they are of great use for improving the quality of weak white wines. Such wines are poured upon the skins of grapes that have served for the preparation of the "vins de paille" and carefully mixed. As soon as the fermentation begins these are taken away, and the fermentation is completed in casks.

Commerce.

SHIPPING IN RUSSIAN PORTS.—In the port of Riga, from the 1st June to 1st September, 1,011 vessels arrived and 969 sailed. In the sea of Azof, from the opening of the navigation to the 3rd September, 2,881 vessels passed through the Straits of Kertch; the previous year, in the same space of time, the number of vessels that arrived and sailed was about 5,000. There was last year a great movement of shipping in the port of Cronstadt. During the season that it has been open to navigation 2,702 vessels entered, of which 437 were steam vessels and 2,265 sailing vessels. These vessels are divided in the following manner, according to their nationality:—1,164 English, 365 Dutch, 217 Danish, 136 Prussian, 132 Hanoverian, 119 Swedish, 111 Norwegian, 99 Russian, 90 French, 79 Schleswig-Holsteiners, 77 from Lubeck, 59 from Oldenburg, 24 from Mecklenburg, 24 Italians, 12 Americans, 6 Belgians, 4 Austrians, and 3 from Hamburg.

AMERICAN GOLD.—Since the 1st of January, 1866, the receipts of gold at New York from California have amounted to about seven millions sterling. This sum is considerably under the exports in the same period, about £11,000,000. This is the largest amount shipped since 1859, when over 12 millions sterling were forwarded, chiefly to England. On a comparison of years it appears that the annual loss of bullion to the States, that is the difference between the direct imports and exports, is about ten millions sterling. So large an outflow would seem to indicate impoverishment, but it must be recollected that the annual value of the gold and silver raised in America is about 21 millions sterling, the whole of which is immediately passed into active use. So long as the mines of California, &c., continue to yield largely, so long will capital continue abundant in the United States.

COAL EXPORTS.—Messrs. Higginson's circular gives a statement of the export coal trade of the port of Liverpool during the past eleven years, showing the increase of the coal trade at Birkenhead by rail, during the same period, and the quantity exported from there, separate from that shipped on the Liverpool side of the river. There were exceptional causes at work during the year 1865, to cause the exports from the Mersey to fall off as compared with 1864, a large quantity of tonnage usually loading at this port being locked up in eastern ports for want of cargoes to bring them home. This has therefore taken much of the business that would have been done at Birkenhead to the east coast and Severn ports. There was also a great falling off in the quantity of South Wales coal exported from Birkenhead in 1865 as compared with 1864; the decrease being somewhere about 30,000 tons, the requirements for blockade running steamers at Nassau, Bermuda, and elsewhere, having ceased early in 1865.

Year.	Tons of Coal brought to Birkenhead by Rail.	Tons of Coal Exported from Birkenhead.	Tons of Coal Exported from Mersey, exclusive of Birkenhead.	Total Foreign Exports from the Port. Tons.
1855..	178,368	.. .. ..	.. .. ..	406,561
1856..	211,815	.. .. ..	.. .. ..	415,036
1857..	276,352	.. .. ..	.. .. ..	499,173
1858..	253,061	.. .. ..	.. .. ..	467,478
1859..	309,683	.. .. ..	.. .. ..	564,947
1860..	236,667	144,000	450,040	594,040
1861..	291,015	190,000	434,549	624,549
1862..	356,802	230,000	379,748	609,748
1863..	428,478	248,956	337,777	586,733
1864..	525,665	313,398	433,444	746,842
1865..	486,505	227,348	389,628	616,976

It appears that Liverpool ranks as fourth in quantity of the coal-exporting ports of the United Kingdom. The total quantities sent abroad during the past year from the four largest exporting ports respectively are as follows:—

1865.

Newcastle	2,277,532 tons.
Cardiff	1,450,941
Sunderland	1,123,572
Liverpool	616,976

Colonies.

SOUTH AUSTRALIAN FINANCE.—The finances of the Government are satisfactory, but a considerable falling off in customs and land sales is expected in the year now commencing. Regarding the large balance in the hands of the banks, it is proposed to let them remain for the present, as it is thought some inconvenience might arise from their withdrawal, and they are not wanted for present use. Government propose to borrow £100,000 for the improvement of Port Adelaide, £150,000 for the construction of a new water works reservoir, and £20,000 for a loop line from Dry Creek to Port Adelaide. In addition to these, government has undertaken an extension of the railway system northwards by laying down light rails for horse traction. An Act of Parliament has recently been passed authorising the leasing of crown lands for other than pastoral purposes. Much is expected from this act, which is very liberal. It enables one to take blocks of land in any size less than 2,500 acres, at 2s. 6d. per annum rent. No conditions are imposed upon the lessee, who will be entitled to the fee simple of his leasehold after he has made eight annual payments of rent.

THE LABOUR MARKET IN QUEENSLAND.—The Government are doing everything in their power to provide means to assist the unemployed in and around Brisbane and Ipswich, by the establishment of relief camps, and by offering free passages to those parts of the colony where labour is easily obtainable; but notwithstanding that many have availed themselves of this, and have been conveyed to the northern parts of the colony, the distress in Brisbane still continued. The government have been compelled to alter the rate of wages to men employed in the relief camp from 15s. per three days to 15s. per six days' work, in consequence of which many of the men have struck, and have held a meeting in the outskirts of the town, when it was decided that a petition should be presented to Parliament, praying that they would either grant the unemployed 5s. a day or a passage to Texas, or some colony where labour was more abundant and better wages obtainable. The petition was presented to the Assembly and caused a long discussion. Those who spoke on the occasion were unanimous in recommending government to offer a rate of wages which would keep the destitute from starving, but not interfere with employers of labour, and to convey the unemployed to those parts of the colony where labour was wanted. In the north of the colony as much as 40s. per week has been paid to inexperienced men during the lambing season, and even at this rate sufficient men were not to be obtained.

NORTH AUSTRALIA.—The prospects of a settlement on the north coast of Australia are more gloomy than ever. Mr. McKinlay and his companions, however, speak very highly of the country in Anson's Bay. There is splendid black soil everywhere, commencing close to the sea coast; there is also a fine vegetation, and kangaroos and birds in abundance. The bay is open, but a large island at the north affords a good shelter, and the mouth of the river is large enough to serve as a harbour, but there is a sand-bank across it which should be cleared by artificial means.

RAILWAYS IN VICTORIA.—The revenue of the railways in Victoria for the half-year ending 30th June last, was £276,646 2s. 3d., and the expenditure £126,135 10s. 6d., leaving an excess of revenue over expenditure of £150,510 11s. 9d. The passenger traffic yielded £109,482, and the goods traffic £148,214. The average cost of each train per mile was 4s. 4d. $\frac{52}{100}$ or 45·60 of the accruing revenue. This expenditure is made up as follows:—

	s.	d.
Maintenance to permanent way and works	0	9·55
Locomotive charges	1	8·58
Passengers and goods traffic charges	1	7·67
General charges	0	2·72

On the Williamstown Railway the expenditure was within 7 per cent. of the revenue, the cost per train per mile being 5s. 2·98d. against 4s. 2·05d. on the Murray River line, and 4s. 5·92d. on the Ballarat line.

Notes.

NEW NATIONAL GALLERY.—Foreign ministers, members of the two Houses of Parliament, royal academicians, and the competing architects, will, on presentation of their cards at the entrance door, by the Victoria Tower, in the New Palace at Westminster, be admitted on Monday and Tuesday, the 7th and 8th instant, between 10 and 4, to view the designs for the new National Gallery, in the Royal Gallery; and the public will be admitted on Wednesday, the 9th instant, and the three following days, and also on the four last days of each of the two succeeding weeks.

PUBLIC INSTRUCTION AT MOSCOW.—The following are some statistics on the establishments of public instruction in Moscow in the year 1865. This city, containing 365,000 inhabitants, possesses 167 schools, of which 69 are for boys and 58 for girls, and 40 for children of both

sexes. The number of pupils is 11,366 boys and 4,950 girls, and the schools are conducted by 1,521 professors and 70 female teachers. For university education there is only one establishment, the University. The Academy of Agriculture, and the Conservatoire, which have recently been founded, are not included. General instruction is given in five establishments, containing in all 1,719 pupils; three military colleges, containing 1,426 pupils, and six schools for girls. Besides these there are about a hundred private schools, where elementary and general instruction is given. The 66 elementary schools only contain 4,786 pupils, a very small number as compared with the number of the poorer classes which represent 72 per cent. of the total population. The 106 schools supported by the government, by the town, or by benevolent societies, occasion an annual expenditure of 2,560,000 roubles; of this amount 426,000 roubles is required for the University, and 130,000 roubles for the professional school.

PARIS PARKS.—The works of the new park of the Buttes Chaumont are proceeding rapidly, and the inhabitants of the northern part of the city will soon possess one of the most beautiful pleasure grounds in Europe; and another public place of recreation is about to be commenced on the opposite side of the city. The spot selected for the new park is called Montsouris, and is situated on the left of the little river Bièvre, on the southern extremity of Paris, and commanding an extensive view of the Pantheon, Observatory, and other public buildings on the other side of the Seine, and also of the high lands which bound Paris towards the north-east. The ground is traversed by the conduits which convey the waters of Arcueil to the metropolis, which will facilitate the supply of the artificial lakes and canals of the new park. The site occupies about 40 acres, and the new park will complete the public pleasure grounds of Paris, which will then possess four, the Bois de Boulogne to the west, the Bois de Vincennes to the east, the Parc of the Buttes Chaumont to the north, and that of Montsouris to the south. The piece of ground selected for the new promenade is within the walls of Paris, but at present completely cut off from the city, the only road to it being the military route just within the fortifications; the transformation of this desert spot will therefore include a considerable amount of road work. A new boulevard is to be constructed on one side of the park, and two avenues, each more than 70 ft. wide, planted with trees, will connect the new park with the nearest part of the city. One of these avenues will be more than 800 ft., and the other about 3,000 ft. long. The spot is admirably adapted for the purpose intended, for a waste will thus be converted into an elegant pleasure ground, and the two districts adjoining, heretofore almost cut off from direct communication with each other, will thus be united. The railway now making for the completion of the circular line around Paris passes closely the site of the new park of Montsouris.

SCHOLASTIC REGISTRATION ASSOCIATION.—The first annual general meeting of this Association, open to all schoolmasters and teachers, will be held on Tuesday, 8th January, at three p.m., at the house of the Society of Arts, by permission of the Council. The Honorary Secretary will read a report of the progress of the movement to this date, and will fully explain the constitution and operations of the Association. Several gentlemen of influence will take part in the meeting.

MEETINGS FOR THE ENSUING WEEK.

MON... Entomological, 7.
Asiatic, 3.
Victoria Inst., 8.
TUES ...Medical and Chirurgical, 8½.
Civil Engineers, 8. Discussion upon Mr. Preece's paper, "On Intercommunication in Trains in Motion."
Royal Inst., 3. Professor Frankland, "On the Chemistry of Gases." (Juvenile lectures.)
Photographic, 8.
Ethnological, 8. 1. Lieut.-Col. G. T. Dalton and Dr. Mouatt, "On the Wild Tribes of Central India." 2. Mr. J. Crawfurd, "On the History and Migration of Cultivated Plants in reference to Ethnology—Sacchariferous Plants."
WED ...Geological, 8. 1. Mr. W. Boyd Dawkins, "On the Age of the Lower Brick-earths of the Thames Valley." 2. Mr. George Maw, "On the occurrence of Consolidated Blocks in the Drift of Suffolk." 3. Mr. Ralph Tate, "On the Jurassic Fauna and Flora of South Africa."
Graphic, 8.
Microscopical, 8.
Literary Fund, 3.
R. Society of Literature, 4½.
Archæological Assoc., 8½.
THUR ...Royal, 8½.
Antiquaries, 8½.
Zoological, 8½.
Syro-Egyptian, 7½.
R. Society Club, 6.
FRI .....Astronomical, 8.

Patents.

From Commissioners of Patents' Journal, December 28th.

GRANTS OF PROVISIONAL PROTECTION.

Alkalies—3214—J. Williamson.
Boots, &c., rendering durable—3137—J. Wadsworth.
Bottles, securing and labelling—3230—J. McGlashan.
Chains and chain cables—3041—T. M. Gladstone.
Detaching hooks—3228—W. Clark.
Elastic fabrics—3151—L. Turner.
Fibrous substances, preparing—3157—W. Crighton.
Fibrous substances, preparing—3218—R. Ackroyd and W. Maud.
Flutes—3208—R Carte.
Gas—3226—A. C. Fraser.
Locomotive carriages—2551—J. W. Daniell.
Metal bands, connecting the ends of—3234—H. C. Lucy.
Metals, treating ores of—3212—P. E. de Wissocq and L. Krasinski.
Motive power—3224—W. Clark.
Paper, printing and cutting into sheets rolls of—3222—J. C. MacDonald and J. Calverley.
Pianos, &c., automatical performance of music on—3169—M. A. F. Mennons.
Pumps and fire-engines—3149—H. Bateman.
Railways, chair supports for the rails of—3153—A. Davy.
Rope, carding, &c.—3159—W. E. Newton.
Saws, &c., reciprocating—3236—W. Robertson and C. J. Waddell.
Ships, applying auxiliary power to sailing—3210—R. Duncan.
Spinning and doubling—3155—P. McGregor.
Steam engines—3143—J. Field.
Vessels, propelling—3139—E. Hughes.
Weaving, looms for—3167—J. Nuttall.
Yarns—3216—P. and R. Sanderson.

INVENTIONS WITH COMPLETE SPECIFICATIONS FILED.

Digging machines—3361—W. R. Lake.
Furnaces—3371—W. Clark.

PATENTS SEALED.

1662. T. Godfrey.
1749. H. A. Bonneville.
1751. H. A. Bonneville.
1761. W. Staufen.
1763. G. R. Sheraton.
1766. H. Wootton.
1767. W. Adolph.
1780. W. E. Gedge.
1796. A. Clark.
1803. W. Baines.
1819. W. Hobbs.
1900. M. Bayliss.
1922. W. E. Newton.
2036. W. E. Newton.
2056. A. V. Newton.
2059. C. F. Cotterill.
2192. G. Hunter & W. F. Cooke.
2194. W. Clark.
2468. W. E. Newton.
2566. J. C. Chapman.
2590. W. E. Newton.
2679. J. Bronner.
2714. O.L.Hopson& H.P.Brooks.
2763. J. Storer.

From Commissioners of Patents' Journal, January 1st.

PATENTS SEALED.

1770. D. Nichols and W. B. Leachman.
1774. J. Clegg and J. Smith.
1775. T. Sagar and T. Richmond.

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

3306. J. Clegg.
3278. W. Wilson.
3283. T. Bourne.
3307. J. Dale and H. Caro.
19. J. Bullough.

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

2958. A. McDougall.
2969. J. S. Crosland.

Registered Designs.

Fountain Pen—December 6—4828—M. Turner, Birmingham.
Fire-place, Lintel, and Flue-piece—December 8—4829—J. Gibbs, 6, Doran's-lane, Lord-street, Liverpool.
Paragon Show-case and Counter-guard—December 21—4830—W. Wooding, jun., and J. Johnson, jun., 2, Mare-street, Hackney.
Improved Clamp Skate—December 26—4831—F. Harris, Sheffield.